

# REMARKS

Claims 1-36 are pending in the present application. In the above amendments, claims 1, 8, 11, 15, 18, 25, 28, 32, 35 and 36 have been amended. Support for the claim amendments may be found, for example, in paragraphs [0061], [0076] and [0083].

Claims 8, 15, 25 and 32 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claims 8, 15, 25 and 32 to define the parameter  $\theta \equiv \frac{L-1}{n}$  as defined, for example, in equation (7) in paragraph [0083]. Thus, applicants respectfully submit that the claims as amended are now clear and request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Claims 1, 3-6, 11-13, 18, 20-23, 28-30, 35 and 36 were rejected under 35 U.S.C. §103(a) as being obvious over U.S. Publication No. 2003/0123406 to Yavuz et al. in view of U.S. Patent No. 6,724,815 to Jepsen et al.

Claims 2 and 19 were rejected under 35 U.S.C. §103(a) as being obvious over Yavuz in view of Jepsen and in further view of U.S. Publication No. 2002/0102944 to Haim.

Claims 7, 8, 14, 15, 24, 25, 31, 32 and 34 were rejected under 35 U.S.C. §103(a) as being obvious over Yavuz in view of Jepsen and in further view of PCT Publication No. 02/13448 A2 to Farlow.

Claims 9, 10, 16, 17, 26, 27, 33 and 34 were rejected under 35 U.S.C. §103(a) as being obvious over Yavuz in view of Jepsen and in further view of U.S. Patent No. 6,904,081 to Frank.

Applicants respectfully traverse the above rejections.

Claim 1 has been amended to recite:

“A base station that adaptively allocates at least one resource between a traffic signal and a dedicated reference signal, comprising:

means for receiving a quality metric from a remote station, wherein the quality metric indicates the quality of a signal transmitted from the base station in a common reference signal and received by the remote station;

means for using the quality metric to adaptively allocate a resource between the traffic signal and the dedicated reference signal to maximize the capacity for transmitting the traffic signal to the remote station; and

means for transmitting the dedicated reference signal and the traffic signal to the remote station,

wherein the received common reference signal and the received dedicated reference signal are used to train a receiver at the remote station.”

(Amendments underlined.)

The Office Action repeatedly admits that “Yavuz did not teach expressly, allocates ... at least one resource ... between a traffic signal and a dedicated reference signal.” The Office Action further repeatedly admits that “Yavuz did not teach expressly, allocates ... at least one resource ... between a traffic signal and a dedicated reference signal and means for using the received common reference signal and the received dedicated reference signal to train a receiver at the remote station...” The Office Action contends, however, that Jepsen “teaches in an analogous art, the quality metric ... to allocate a resource between the traffic signal and the dedicated reference signal...”

Applicants respectfully submit that Jepsen teaches away from the claimed invention and that one of ordinary skill in the art could not have possibly derived at the invention as amended from the teachings of Yavuz in combination with Jepsen. As stated above, the Office Action already admitted that Yavuz does not disclose the claimed invention. As to Jepsen, it is directed to a different invention for increasing the data rate in a GSM system by reducing the training data or by replacing the training data structures with user data at call setups. See, for example, Col. 3, lines 47-51, and Col. 4, lines 57-50. Furthermore, Jepsen actually teaches away from the claimed invention by stating that “an adaptive training sequence ... cannot be used ... with a GSM system which includes standard GSM handsets as these rely on a fixed training sequence.... Accordingly, the invention seeks to provide an increased data rate throughput for a communication system by more flexibly structuring the distribution of user data and training data.” (Emphases added.) See Col. 1, lines 54-67. Thus, the combination of Yavuz and Jepsen could not disclose or suggest at least the following elements of the claimed invention as amended:

“means for using the quality metric to adaptively allocate a resource between the traffic signal and the dedicated reference signal to maximize the capacity for transmitting the traffic signal to the remote station...

wherein the received common reference signal and the received dedicated reference signal are used to train a receiver at the remote station.”

Applicants further submit that Haim, Farlow and Frank also do not disclose or suggest the above elements of the claimed invention as amended; i.e., they were not relied upon for the above disclosure. Applicants further note that there is no inherent suggestion or motivation to combine any of the above-cited references as they are all directed to different inventions. For at least the above reasons, Applicants respectfully submit that the combination of elements from Yavuz, Jepsen, Haim, Farlow and Frank, in any combination of the references, do not disclose or suggest the claimed invention.

Independent claims 11, 18, 28, 35 and 36 include similar features to claim 1, and claims 2-10, 12-17, 19-27 and 29-34 depend from at least one of claims 1, 11, 18 and 28 so they all should be in condition for allowance for the reasons stated above.

### REQUEST FOR ALLOWANCE

In view of the foregoing, applicants respectfully submit that all of the pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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